Table 3 ST use (seven day self reported point prevalence) by racial/ethnic group

	ST use (% (n))				
	1999	2000	2001	2002	2003
White	36.2 (369)	34.3 (386)	33.0 (479)	38.0 (569)	30.1 (458)
Latino	10.8 (28)	14.5 (55)	13.3 (69)	16.4 (72)	13.9 (75)
African American	20.3 (27)	14.3 (20)	17.1 (32)	21.4 (34)	19.0 (28)
Native American	47.1 (8)	47.1 (8)	36.0 (9)	52.4 (11)	62.5 (10)
Asian	0.0 (0)	14.3 (2)	28.6 (6)	26.9 (7)	30.3 (10)
Other	17.0 (45)	22.0 (9)	25.7 (9)	10.7 (3)	31.3 (10)
Response rate*	88.0%	91.1%	91.6%	79.4%	96.1%

There were no appreciable differences in ST use by race between minor and major league players, therefore this table collapses across league. ''Other'' represents respondents who classified their race in the category labelled ''other''.
*Proportion of all respondents who reported race/ethnicity.

DISCUSSION

Annual surveys of professional baseball players were conducted from 1998 to 2003 to assess the prevalence of ST use over time. Major league players reported high prevalence of ST use compared to the general population of young adult males, with 30–36% of players reporting regular use across the six years of the survey, and no significant change in prevalence over time. A national survey of males ages 18–25 years in 1998 found that 10.5% had used ST in the past month, and by 2002 (the most recent year that nationwide prevalence rates are available) that percentage had dropped to 9.4%.[16 17] Minor league players also reported a higher prevalence of ST use than the general population of young males, but a lower prevalence than among major league players, and a significant decline in use from 1998–2003, with the greatest drop (and a significant one) between 1998 and 1999 and rates of 24–27% thereafter. Minor league players were subject to stronger policy and environmental influences throughout the years of the surveys as there has been a ban on use of ST while in uniform and players can be fined for infractions. This policy has been well publicised but enforcement varies widely as it falls upon the umpire to cite the player. In addition, players coming from college teams would have been subject to the NCAA ban on ST use implemented in 1994. These findings suggest that sustained multi-level policy and programmatic efforts influenced ST use by minor leaguers. While the majority of players report using ST before becoming professional, 36% of minor league players report taking it up after they became pro.

Table 4 Readiness to quit, quit attempts, reasons for quitting, and quitting aids used among major and minor league players (percentage of regular ST users)

	2000	2001	2002	2003
Readiness to quit				
No thought of quitting	11.1	11.2	11.0	12.3
Think I need to consider quitting	12.0	13.9	16.9	18.3
Think I should quit, but not quite ready	36.7	29.0	25.4	26.6
Starting to think about how to change use	27.2	30.7	31.9	32.5
Taking action to quit	13.2	15.0	14.7	10.4
Quit attempts				
Made one or more serious quit attempts in past year	51.2	51.4	41.9	40.1
Reasons for quitting				
Chewing is hazardous to my health	76.4	71.2	74.0	–
Don't want to get cancer	64.4	58.3	61.4	–
It portrays a negative image to kids	35.4	24.3	33.7	–
My significant other doesn't like it	32.1	25.7	31.1	–
It has unpleasant effects on my appearance	28.9	25.1	28.2	–
Bad role model for my own kids	28.1	16.5	26.6	–
The cost	22.6	23.4	21.5	–
Quitting aids used				
Support from spouse	36.5	38.9	49.8	–
Advice from dentist	29.3	26.8	34.1	–
Dental exam	25.5	27.2	33.0	–
Support from other players	23.5	25.2	30.2	–
Advice from trainer	22.1	22.7	24.9	–
Nicotine gum	11.3	10.9	16.9	–
Advice from specialist	8.7	14.1	9.9	–
Nicotine patch	8.1	8.7	8.9	–
Other nicotine replacement	4.7	5.7	2.9	–
Bupropion (Zyban)	3.2	5.2	2.9	–

In contrast to ST usage, baseball players report a substantially lower prevalence of cigarette smoking than the general population, both among major (14.4% in 1998 to 10.3% in 2003) and minor (13.1% in 1998 to 4.2% in 2003) league players. Nationwide rates of smoking cigarettes in the past month for males ages 18–24 years were 31.3% in 1998 and 32.4% in 2002.[16 17] Cigar smoking rates were similar to rates among the general population.[18] Lower prevalence of cigarette smoking among baseball players may be due to the increasing perception of smoking as an unhealthy habit, especially for athletes. It would seem that in the baseball culture, ST, although it has much potential for causing negative health effects, is seen as a more acceptable form of tobacco to use.

Given low and variable response rates and the possibility of self selection and self report biases, the results from these surveys may over- or underestimate actual ST prevalence among the professional baseball players surveyed. However, findings suggest substantial current prevalence at rates that are consistently to be higher than those in the general population of young males. Cigarette and cigar usage rates appear lower than typical among young males, indicating that ST remains the tobacco of choice for professional baseball players. This has been the trend dating back to heavy free sampling and player targeted marketing in the 1970s by the US Tobacco Company.[19]

While ST use is in many ways tied to the game of baseball, the majority of players continue to use year round, consistent with the fact that many perceived themselves to be addicted and reported other signs of addiction. A majority of the players who used ST showed some interest in quitting. Many cited health concerns, effects on appearance, and the negative impact of their ST use on spouses and children as major reasons for wanting to quit. These findings show the need for continued intervention efforts.

The most frequent reasons players gave for using ST were that it gives them something to do, is a habit or ritual, and that they are addicted. As documented previously, very few players reported that they thought their playing was improved by ST use.[19] This is consistent with previous research showing no relation between ST use and motor performance tasks.[20]